Success
Stories
from
the
Missouri
Buyout
Program



August 2002





Forward

"Mitigation is the cornerstone of emergency management. It's the ongoing effort to lessen the Impact disasters have on people and property. Mitigation involves keeping homes away from floodplains, engineering bridges to withstand earthquakes, creating and enforcing effective building codes to protect property from hurricanes -- and more. "

From FEMA's Website, Federal Insurance and Mitigation Hazard Mitigation Grant Program

The enclosed report "Success Stories from the Missouri Buyout Program" highlights a few of the countless success stories from the unprecedented buyout program undertaken in the State of Missouri in the aftermath of the devastating 1993 floods. In this report, you will find a few examples of how mitigation solutions have benefited residents and tax payers statewide. Mitigation steps taken after the 1993 floods have made subsequent flood events far less destructive.

The acquisition of flood prone properties from the floodplain is a permanent mitigation solution that completely eliminates the flood-damage-flood cycle. The benefits of these efforts are clearly demonstrated by this report and after a very short time period of less then 10 years.

The credit for the success of the Missouri Buyout Program goes to the perseverance of all of our partners in emergency management from state and Federal agencies to local floodplain managers, community leaders, volunteer agencies, and of course, the strength and endurance of the citizens within the state of Missouri throughout the course of the last 10 years.

We thank each and everyone of you for all of your efforts and we look forward to continuing these efforts and sharing the successes that strong partnerships and hard work can bring.

ORIGINAL SIGNED BY	ORIGINAL SIGNED BY		
Dick Hainje, Regional Director	Jerry Uhlmann, Director		
FEMA Region VII	Missouri State Emergency Management Agency		

Victimized by floodwaters in 1993 and 1995, Missourians are better able to weather the storms of 2002

Executive Summary

Mud oozing from under floorboards. Basements filled with snakes.

The stench of waterlogged trash and rotting food lingering in towns for weeks and even months.

Anyone who lived through the 1993 Midwest floods will never forget them.

Of the nine states affected by flooding during the spring and summer of 1993, Missouri was the

The people and communities profiled in this report are just a few of the countless success stories from the Missouri Program

Missouri Buyout Program.

hardest hit, with damages totaling \$3 billion.

The Missouri floods of 1993 ruined more cropland, destroyed more residences and businesses,

"I'm glad we got out," says Debbie Groves, revisiting the site of her flood-prone home in Cape Girardeau. Groves was one of the thousands of Missourians who participated in the Missouri Buyout Program.

and cost taxpayers more money than any other flood in the state's long history of flooding.

For the thousands of Missourians who lost their homes, businesses, and everything they cherished, the floods were a living nightmare.

But thankfully for many, it has not been a recurring nightmare.

Since 1993, the Federal Emergency Management Agency (FEMA) and Missouri State Emergency Man-

agement Agency (SEMA) have partnered with local governments to help thousands of willing homeowners move out of the floodplain.

The people profiled in this report are just a few of the countless success stories from the Missouri Buyout Program. Devastated by the floods of 1993 and 1995, these people and communities took seriously the opportunity to move out of harm's way.

Having experienced one flood nightmare, they resolved to do their best to make sure it was their last.

When floodwaters returned to Missouri in May of 2002, these Missourians — and thousands like them — were spared the heartache of watching their homes and lives devastated by another disaster.

People across the state of Missouri took pride in taking responsibility for the safety of their families, homes, and businesses.

In the process, they spared taxpayers the expense of additional federal disaster assistance, which they no longer need to weather the storms.

Since 1993, FEMA has provided \$54.9 million to the State of Missouri in Hazard Mitigation Grant Program (HMGP) funding. Missouri has used the majority of these funds to acquire, relocate, or elevate more than 4,800 properties.

BUYOUT Program background

- The Missouri Buyout Program was funded by FEMA's Hazard Mitigation Grant Program (HMGP), the Department of Housing and Urban Development (HUD) Community Development Block Grant Program, Missouri General Revenue Funds, and other sources.
- In all, more than \$100 million was allocated to the Missouri Buyout Program.
 - A buyout is a voluntary partnership between willing homeowners and local communities with the goal of removing people and homes from the floodplain.
- The Missouri State Emergency Management Agency (SEMA) developed policies and procedures for allocating buyout funds to Missouri communities, which then managed their own buyout projects.
- One of the hallmarks of the buyout program is that it is a voluntary program.
 Community officials identified primary residences within the floodplain that were damaged or destroyed by flood-waters, and approached the homeowners with the offer of a buyout.

The State of Missouri allocated \$2.3 million from State General Revenue Funds for the Missouri Buyout Program.

- Once the local government acquired a property, the land was dedicated in perpetuity for open space and recreational uses or simply returned to natural wetlands.
- No enclosed buildings except public restrooms can be built on the acquired properties.
- Each community that participated in the buyout program decided for itself what it wanted to do with the acquired land within the parameters of allowed uses.



The Missouri Buyout Program was born in the aftermath of the 1993 Midwest floods, when 37,000 Missourians were displaced from their homes.

...In the months since the last deluge, authorities have learned a few useful lessons. The most important of these was to "retire" the most vulnerable riverside properties. Under a federally-funded buyout program, local towns have been able to purchase and demolish the most frequently flooded properties, turning them into parks or recreation land.

The Economist, May 27, 1995

ARNOLD Getting out of the floodplain



"No way did I want to sandbag again," says Joe Moore, visiting the site where his house once stood. "1993 was my last flood."

"We don't worry about floods in Arnold anymore," says Joe Moore, 66. "It used to be every time it rained hard, we flooded. But not anymore."

Not for people like Moore, one of 72 property owners in Arnold, Mo. (pop. 19,965) who participated in the buyout program.

Rather than continually responding to floodwaters, city officials and willing homeowners like Moore resolved to find a permanent answer to prevent or lessen damages to homes during Arnold's frequent floods.

Their solution? Using federal funds

from FEMA to buy out homes in Arnold that sat in the floodplain where the Meramec and Mississippi Rivers meet.

Since 1993, the City of Arnold has received more than \$2.9 million from FEMA and 1.4 million from CDBG funds to buy out 72 properties in Arnold's floodplain.

Funded by FEMA and administered by SEMA, the Missouri Buyout Program enabled the City of Arnold to purchase Moore's home at pre-flood value, demolish it, and then deed-restrict the land to open space.

"We got the full value for our home," said Moore, who moved out of his flood-prone home in August 1994. "My wife and I used the money to build a new home on the other side of Arnold, but not in the floodplain."

Asked if he misses his neighborhood and the white frame house he and his wife Patricia called home for 19 years, Joe Moore can only laugh.

"I put sandbags around that old house a dozen times," he said, recalling the house that sat on a deadend street called Oye Drive. "I fixed up the basement more times than I like to remember. There was no way in the world I wanted to do any of that again."

Chances are, he won't have to. Nor will the City of Arnold, the State of Missouri, FEMA, or U.S. taxpayers have to devote significant funding to protect Joe Moore or his former floodplain neighbors during the next flood event or assist them to repair their flood-damaged homes.

Instead, city planners and local residents can turn their attention to planning creative uses for the open space acquired through the buyout.

"We're in the process of planning new ways to redevelop this area that are compatible with the floodplain characteristics," explains Mike Deruntz, Arnold's Community Development Director. "This is one of the major green land holdings that is readily accessible to a large population in the St. Louis region. We have a park down there now and we'll be developing trails, ball fields, and other forms of passive, open recreation. Families are coming back and having a positive experience."

Arnold still experiences frequent flooding. In May 2002, the Meramec River crested at its 8th highest level on record.

But unlike the 1993 flood disaster, which highlighted the problem of people living in Arnold's floodplain, the 2002 event proved the cost benefits of getting the people out and the homes razed.

In the process, the buyout also brought peace of mind to residents like Joe Moore.

"We just don't have floods in Arnold like we used to," said Joe Moore, without the slightest trace of nostalgia.

The shrinking cost of flood-fighting in Arnold

	1993 flood	1995 flood	May 2002 flood (as of 6/25/02)
Sandbagging sites in Arnold:	60	3	0
FEMA Public Assistance to Arnold*	\$1,436,277	\$71,414	\$ 0
Applications from Arnold	52	26	1

^{*}FEMA's Public Assistance program provides funding to repair public facilities, such as roads and bridges, as well as to reimburse local governments for many flood-fighting expenses.

CAPE GIRARDEAU Learning what a "100 year flood" is

Cape Girardeau learned the hard way what the term "100 year flood" means.

In 1993, this historic Mississippi River town (pop. 36,625) watched with horror as floodwaters slowly crept up. As the waters rose, so too did the number of volunteers who came from across the nation to help build sandbag levees around the threatened homes.

After the floodwaters damaged 160 homes in Cape Girardeau's floodplain, the volunteers stayed to help locals clean and repair the mud drenched homes.

At a fall 1993 meeting, the Cape Girardeau City Council considered pursuing a buyout. But what were the chances of the city experiencing another 100-year flood? What was the rush in removing homes and families from the floodplain?

Two years later they found out. In the spring of 1995, the river began rising again. But this time, the flood came fast — and the volunteers didn't.

On May 24, 1995, the river crested at 46.7 feet, more than 14 feet above flood stage, and just shy of the highest recorded crest of 48.5 feet on August 8, 1993.

The city had experienced two 100-year floods in a span of three years.

As locals learned, a 100-year flood does not mean that such a catastrophic event is likely to happen once every 100 years. Rather, it means that *every* year, there is a 1% chance of such a flood. Over the course of a century, a flood of

such magnitude is certain.

By May 28, 1995, 100 homes had flooded in Cape Girardeau's floodplain. Many of them were the same properties that had flooded in 1993. The difference in 1995 was that no one said it wouldn't



"When you get to be my age, you don't want to be fighting those floods," says Woody Sadler with his wife, Virgie, outside their new home in Cape Girardeau.

happen again.

The search for a permanent flood solution began in earnest.

With a creative cost-share between federal, state, and local governments, as well as charitable non-profits, the City of Cape Girardeau eventually bought 114 properties in the flood prone areas and relocated the residents to safer neighborhoods.

After demolishing the acquired structures, the land was deed-restricted for

open space.

Now, the only cost associated with the land is mowing. Best of all, the vast majority of people who lived in the homes and worked in the floodplain neighborhoods are no longer living in harm's way.

In May 2002, the Mississippi River at Cape Girardeau crested at 45.7 feet, its third highest level after the 1993 and 1995 events. But this time, the flooding affected only eight homes.

"It was almost a non-event," said Doug Leslie, Director of Public Works for the City of Cape Girardeau. "We didn't have to scramble around to secure our water supply. We didn't have to sandbag in more than three or four places. We didn't have weeks of clean-up to go through either. I think we had one dump truck full of sandbags this year compared to the hundreds of dump truck loads in the 1993 and 1995 floods."

The sandbags weren't necessary because almost all of the flood-prone homes in Cape Girardeau had been bought out and razed.

"It would've gotten us this year," said Woody Sadler, who lived for 47 years with his wife Virgie in Cape Girardeau's floodplain before participating in the buyout program. "A lot of homes and people would've been flooded again. But we weren't there. We got out."•

Funding for Cape	Girardeau's Buyout of	114 properties

	Amount	Percentage of Project
FEMA share	\$1,141,185	41%
State General Revenue Funds	\$ 589,400	21%
Community Development Block Grants	<i>\$ 767,406</i>	28%
City of Cape Girardeau	<i>\$ 79,379</i>	3%
The Salvation Army Midland	\$ 84,000	3%
Interfaith Disaster Response	\$ 82,000	3%
Program Income	\$ 4,845	1%
TOTAL	\$2,748,215	

Woody and Virgie Sadler

Woody and Virgie Sadler moved into their green frame home on the aptly named Water Street in 1949. For years they saw the Mississippi River rise and fall, but it never threatened their home in the floodplain neighborhood known as Red Star.

That changed in the summer of 1993.

"Somebody told me the water was coming," recalls Woody Sadler, a retired laborer and World War II veteran. "I said, 'I know it's flooding, but it won't get here. The highest the water ever gets is up to the front porch of the house across the street.'"

That was in late July. On an early August morning before breakfast, Sadler looked under his four-room house to check for water. Nothing.

"After breakfast I came outside and there was water six inches deep under my house."

Sadler began sandbagging around the house.

"We built a wall of sandbags around it," he recalls. "I put a pump under the house. It never quit running. Pretty soon I had eight pumps going, 24 hours a day."

Woody and Virgie, then 71 and 76 respectively, also put all of their furniture on blocks. "Just in case," said Woody.

Other than the expense of the pumps and the effort involved in sandbagging, the Sadlers were lucky.

They were lucky again in 1995 when the floodwaters returned.

"We got eight inches of water in the yard," says Woody, who once again created a sandbag barrier around his house. But like others in town, Sadler was growing weary of battling the flood.

"When you get to be my age, you don't want to be fighting those floods," said Sadler. "It's too much stress."

It's hard work, too.

"Taking the sandbags down isn't easy," he said. "When you're putting them in, they're dry and not so heavy. But after they get wet, it's hard work."

"And the snakes," adds Virgie. "That's what I hated. Snakes and slugs and the smell of rotten fish. The odor is unbelievable."

The Sadlers knew the Mississippi River well enough to know it would continue flooding their Red Star neighborhood.

"It was only a matter of time before we'd get it," said Woody. Rather than "get it," the Sadlers got out.

In 1997, they accepted a buyout offer that Woody Sadler said paid approximately half the price of their current \$55,000 home on North Spanish Street, blocks from the floodplain.

"I didn't think about leaving Cape Girardeau," he said. "I love it here. We're really satisfied with this house. It's bigger than our old house. Better, too."

In May 2002, the Mississippi River flooded Cape Girardeau once again.

"I went down and looked at it," says Woody. "Naturally, I'd check."

The floodwaters rolled over the site of the Sadler's former neighborhood.

"It makes you feel good that you're out of it," said Woody Sadler. "Getting out was one of the best things to ever happen to us."•



For many homeowners, cleaning up after the 1993 floods was the most grueling part of the disaster.

Pete and Juanita Cooper

During the 1993 flood, Pete Cooper, then 62, didn't

bother trying to sandbag his wood frame home on Poplar Street in the Smelterville neighborhood of Cape Girardeau.

"It was useless," he said.

"The water was up to the windows."

Once cleared, the publicly owned buyout proper-

ties can be used for parks and open spaces more

consistent with the threat of repeat flooding.

The 1995 flood was "the same thing," said Cooper, a retired laborer. "Every time it flooded, we flooded."

Though he had often considered moving his wife Juanita and six children from the flood-prone Smelterville neighborhood, finances always prevented them from doing so.

"I wanted to get out," said Cooper, "but I just couldn't afford it."

The buyout program gave the Coopers the chance they'd been waiting for.

With \$23,655 from the Missouri Buyout Program, the Coopers were able to move to a house on Park Street, out of the floodplain.

"The buyouts were real nice," Pete Cooper said. "They helped us get out."

Of course when the floodwaters returned in 2002, Cooper couldn't resist heading back to the old neighborhood to look around.

"We felt real good we weren't living there," he said. "I'm sure glad we got out of it."

His daughters agree.

"If you'd been in that house this year, you'd have been flooded again," said Patty Hicks. "You don't need that, Dad."•

ST.MARY Making flood damage a thing of the past

In recent years, tiny St. Mary, Mo. (pop. 377) attempted to use its antique mall and quaint Main Street to lure visitors to this Mississippi River town in Ste. Genevieve County.

However, St. Mary was becoming better known for its chronic floods than for its antiques.

The problem was a five-acre parcel of land on the city's southern edge where the St. Lawrence Creek and the Regular Slough flooded frequently, damaging a handful of homes.

Many homeowners in the area accepted the repetitive flooding – and the repetitive checks for federal assistance – but only because moving to higher ground was financially impractical.

The floodwaters that overtook St. Mary in 1993 were more severe. They stayed for a month, damaging every structure outside the makeshift levee built by residents to save Main Street.

After the waters receded, city officials aggressively pursued federal and state funding to buy out the homes that sat in the city's 100-year flood plain and move the residents to higher, safer ground.

With \$93,390 in funding from the Missouri Buyout Program and \$237,785 from the Missouri Department of Economic Development, the City of St. Mary purchased 36 homes and helped their neighbors relocate.

The success of the buyout was evident in 1995, when floodwaters returned to St. Mary. All but four families had moved out of the flooded area.

In May 2002 when St. Mary flooded again, no one seemed to mind.

"Nobody had water in their homes this time," St. Mary City Clerk JoAnn Donze reported. "Two people had water in their yards, but nobody had flood damage to their house."

The success of the St. Mary buyout underscores the wisdom of letting local communities oversee the projects.

"We knew which houses to buy," explains Donze. "We knew the homes that flooded time after time."

According to JoAnn Donze, residents in St. Mary were eager for the buyout.

"People were ready to leave their homes," Donze says. "A lot of them had been flooded so many times. They didn't want to go back to that."

But they didn't want to leave St. Mary, either.

"We got government funding to help build new neighborhoods and bring back businesses," says Donze. "So now we have younger families and more businesses."

its chronic floods than for its antiques. Now, locals can spend more time shopping for an-The problem was a five-acre parcel of land on the 'tiques and less time trying to save their own treasures 's southern edge where the St. Lawrence Creek from floodwaters. ●



"We knew which homes to buy," says St. Mary City Clerk JoAnn Donze.

When it comes to buyouts of flooded residential property, Missouri is well in front of the pack of flood-ravaged states.

Jefferson City News Tribune

ST. CHARLES COUNTY The successful experiment

St. Charles County has a long history of flooding. Situated at the confluence of the Missouri and Mississippi Rivers, the county of almost 300,000 residents suffered perhaps Missouri's worst flood damage in 1993, when more than 2,100 homes were condemned as a result of the disaster.

St. Charles County was hit hard by the floods. But it

fought back with the Missouri Buyout Program. Between 1993 and 1995, St. Charles County used \$5.78 million in FEMA funding and \$8.8 million from the Community Development Block Grant program to acquire 1,159 properties from willing homeowners.

When the county experienced a second major flood in 1995, St. Charles County had an opportunity to test the effectiveness of its buyout program. The results were impressive.

Of the 1,159 properties acquired between 1993 and erty is now an outdoor classroom 1995, St. Charles County Planning Director Steve

Lauer estimated that at least 95 percent would have flooded again in 1995.

In St. Charles County, Mo., a

at Lindenwood University.

seven-acre parcel of buyout prop-

"These were the places where, year after year, we saw the highest incidence of repetitive loss," Laurer said. "If you look at it over the long-term, there's a real cost savings in buying out these places. And there's the peace of mind it gives people. They're really glad to be out."

When Missouri received a Presidential disaster declaration for flooding in May 2002, St. Charles County, the worsthit county in the 1993 flood, was not included in the disaster declaration. The damage was simply not significant enough to justify it.

"The flooding wasn't as bad as in '93," explains Lauer. "That makes a difference, of course. But what really helps is that the flooding occurred along the rivers, where we've bought out a lot of homes. The people who didn't participate in the buyout have elevated their homes. So it's a combination of buyouts and elevations."

St. Charles County transferred much of the buyout land to the City of St. Charles to use as park and recreational areas. Other parcels have been leased for garden spots.

Perhaps the most creative use of the St. Charles buyout land is the outdoor classroom at Lindenwood University.

"It's been wonderful for the students," said Prof. Daryl Anderson, who teaches biology and oversees the seven-acre classroom where flooded cabins once floated.

"These are true wetlands and ideal for students who ulti-

mately want to work for the EPA or as park rangers or be involved in fish and wildlife preservation," said Prof. Anderson. "We've had a chance to do all kinds of outdoor biology. The students take soil samples from the marsh. They observe in a way that teaches biological techniques. Some of these kids are becoming experts in migratory birds and frogs and plants. They're not just learning about science. They're

> learning science, which is a methodical way of thinking and doing things."

Likewise, the Missouri **Buyout Pro**gram was methodical. It of-

fered homeowners, in the floodplain, a practical way to move out of harm's way. It further spared them the heartache of having to live though another flood. It also saved taxpayer dollars that would have been necessary to protect homeowners during another flood.



NEOSHO From city blight to city park

How do you turn an eight-acre city park into 175 acres?

Ask Jim Cole, City Manager of Neosho, Mo. (pop. 10,616), which

suffered frequent – and very costly – flooding from Hickory Creek.

On average, the floods were causing \$760,000 a year in damage to homes, businesses, and public buildings, and \$95,000 damage per year to roads and bridges.

A permanent solution was needed to solve Neosho's chronic flood problem.

An answer emerged in the form of a plan. Working in

conjunction with the U.S. Department of Agriculture's Natural Resources Conservation Services (NRCS), Neosho devised a watershed plan that involved the creation of dams, retention ponds, and a concrete waterway to direct the runoff.

It was a solution, but a cost-prohibitive one. The most expensive part of the plan was purchasing the 52 residential properties that sat in the path of the proposed waterway.

The historic flood of 1993 provided more heartache to Neosho, but also a glimmer of hope.

It occurred to City Manager Jim Cole that the funding might be available through the Missouri Buyout Program to acquire properties in Neosho's floodplain from willing homeowners and help them relocate to safer neighborhoods.



Cole and key staffers worked all night on the City's buyout proposal they would submit to the State of Missouri, who administered the Missouri Buyout Program.

The efforts paid off. Neosho was awarded \$1,386,634 from FEMA, which it combined with funding from HUD's Community Development Block Grant Program. With its buyout funds, Neosho purchased 52 residential properties in the floodplain. Every homeowner in Neosho who was given the opportunity to exchange his or her repetitively flooded home for a check from the City did so.

"They were ready to get out," says Jim Cole, who personally negotiated every acquisition in Neosho.

The buyout was tested in 1995, when Neosho flooded again. This time, the damage was minimal. Most of the residents had moved out of the hardest hit areas.

Those who remained in harm's way in 1995 suffered additional damage. They too were finally ready to get out. However, there was very little

"We've gone from buying sandbags to lawn mowers," says Neosho City Manager Jim Cole. buyout funding left.

No problem for Neosho residents, who decided by a

75% margin to levy a 3/8th cent sales tax on themselves to pay for the additional 26 acquisitions and to maintain the newly acquired land, which is now part of Neosho's 175-acre city park.

In May 2002, the floodwaters barely made a ripple in Neosho, now that its floodplain is mainly parkland.

"We've gone from buying sandbags to lawn-mowers," said Jim Cole.

With their watershed plan a proven success, Neosho can turn its attention to designing their new park. So far, the plan includes baseball diamonds, hiking trails, a community soccer field, and fishing areas from the banks of Hickory Creek.

"And that's just the beginning," said Cole, with understandable pride.

FLOOD FACTS Everyone lives in a flood zone

- You don't need to live near water to be flooded.
- Floods can be caused by storms, melting snow, dam or levee failures, water backup due to inadequate or overloaded drainage systems.
- In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer funded disaster relief for flood victims and the increasing amount of damage caused by floods.
- Flood damage is NOT covered by most homeowners policies.
- You can protect your home, business, and belongings with flood insurance backed by the National Flood Insurance Program.
- You can buy flood insurance no matter what your flood risk is provided your community participates in the National Flood Insurance Program.
- Almost 25 percent of all flood insurance claims come from low to moderate risk areas.
- There is a low-cost policy for homes in low to moderate risk areas.
- You can buy NFIP flood insurance from private insurance companies and agents.
- There is usually a 30-day waiting period before coverage goes into effect.
 - Federal disaster assistance is available only if the President declares a disaster.
 - More than 90 percent of all disasters in the U.S. are not Presidentially declared.
 - Flood insurance pays even if a disaster is not declared.



Across nine states in the Midwest, more than 9,000 homeowners sold their properties after the Great Flood of 1993. Local governments turned much of the land into parks and greenways. That transformation is part of why the floods since then have caused far less misery.

St. Louis Post-Dispatch May 19, 2002

Flood buyout reduces water damage in Cape

The Mississippi River at Cape Girardeau crested at its third-highest level ever on Sunday, but the flooding was more coffee shop chatter than a disaster story in the flood-walled city thanks to a government buyout of homes and businesses that left most residents high and dry . . .

Southeast Missourian May 22, 2002

For more information, contact:

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National Flood Insurance Program
General Questions 1-800-427-4661
Purchase new maps 1-800-358-9616
Flood Hazard Map Questions 1-877-336-2627